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BY WALTER CHANNING, M. D.

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THE following cases first appeared in the Boston Medical and Surgical Journal, and in different numbers of that work. They are now published together, with such alteration as the new form requires, and with much new matter relating to the administration, and effects of Ether:

To the Editor of the Boston Medical and Surgical Journal.

DEAR SIR,—I beg leave to offer you the following cases for publication. They are instances of the use of ether in midwifery practice, in a few cases only; still, such is the importance of that discovery which has abolished pain in so many, and in such a variety of cases—and such the state of opinion, and such the popular and professional interest, in everything bearing usefully on the subject, that I venture to present them in an amount of detail which otherwise might seem unnecessary. To my mind, in the present position of this great discovery, this is the most proper method of communicating such facts.

I look back on the occurrences of these trials of ether with entire satisfaction, and with the deepest pleasure. The ether did just what was looked for from its use. It did it at once, and with no circumstances of embarrassment or difficulty. When its influence was no longer needed, its effects passed quietly away, and left a repose—a continued sense of relief, which, in an equal degree, and like kind, I do not remember to have witnessed before. I shall with pleasure communicate through your Journal the results of such farther trials of ether as circumstances may seem to authorize me to make. And no one should venture upon such trials until he is perfectly satisfied that such circumstances exist. A case came under my observation this day, which impressed upon my mind very strongly the importance of this rule of practice. It was one of unusual severity, and the time of suffering was long. Still there were circumstances in the previous history of my patient, and in her actual condition, which deterred me from taking ether with me. Such, however, at length, was the urgency, I may say violence, of demand for relief, on any terms, and for the use of ether especially, that I sent for it. I felt that the moral conviction, always so powerful in labor, that relief would be obtained from this agent, might revive hope, and give encouragement, where a most depressing despair existed, and that thus the labor might be naturally terminated. Whether my reasonings were correct or not, I can say, that almost immediately after the messenger was despatched, efficient uterine contractions came on, which speedily, and safely, accomplished delivery.

I remain very truly, yours, W. C.

CASE I.

Mrs. H., aged 23, was taken in labor, for the first time, May 5th, at 12 o'clock at night. I saw her between 9 and 10, of the morning of the 7th, in consultation with her medical attendant, Dr. W. E. Townsend. His pupil, Mr. Jerome Dwelley, was present, and who also from the beginning had faithfully attended to the case. The pains had been frequent and very severe. Some diminution of suffering had followed the exhibition of an opiate, which had been given before I saw the patient. Patient was well purged with castor oil day before labor. I found on examination, the head fairly in the pelvis, where, I was told, it had been many hours. There was no *show*. The vagina was swollen, rough, hot, especially about the urethra, or anterior part of the pelvis. The os uteri was somewhat dilated, but less in its anterior portion than elsewhere, though in no part of its circumference had it cleared the head. It was swollen, smooth, hard, undilatable. It gave just that feel which so strongly intimates that the labor will be protracted, and accompanied by much suffering. The scalp was much swollen, and protruded as a tumor of a conical shape through the firm ring formed by the undilated and undilatable os uteri.

Mrs. H. was comparatively easy, from the opiate apparently. Her pulse was natural. Her strength was not much exhausted. Her stomach bore food well. There was no cerebral trouble, and the bladder had been duly emptied by the catheter. Under these circumstances I suggested delay; and it was agreed

to wait to observe the changes which might occur in the present rest, and on the recurrence of pains. I saw her again at noon. Belladonna ointment was recommended, as no important change had occurred in the state of the os uteri. I was called to see her at about 6, P. M., about forty-two hours since labor began. I learned, on reaching the address, that the ointment had been used, and a solution of tartarized antimony exhibited, and that some change had occurred in the os uteri, namely, that it was more dilatable. Her pulse was now 120 in the minute. It was less strong than at noon. She could speak only in a whisper, and with great difficulty even so. She complained of great distress, and most earnestly entreated to be relieved of her terrible suffering. On examination I found the os uteri somewhat more dilatable, and it was agreed that the forceps should be used.

Dr. Townsend called on me to make the visit just related. I said to him, in my study, that this seemed a very fair case for the use of ether. He agreed with me in this opinion, and added that he had a quantity of pure ether at home, and a sponge of suitable size for its inhalation, and that he would meet me at his patient's house. We soon met there, and I proceeded to apply the forceps. I selected Davis's solid forceps, because they are narrow, thin, and very easily introduced, and seemed less likely to injure the os uteri than a broader and a thicker instrument. The application was perfectly easy, and I made an extracting effort, which was attended with very severe pain. Mrs. H. soon became quiet, and I desired Dr. T. to apply the sponge, saturated with ether, to the mouth and nose. This he did, and in about a minute she

was under the full influence of the ether. The first inspiration produced a slight cough, as if the larynx had been irritated. It was like the sound by which an effort to remove some irritating matter from the air-passages is commonly accompanied. The next noticeable effect, and which was quite an early one, was a sudden movement of the body, such as is made sometimes when one is falling asleep, and has consciousness enough to know this, and to rouse the will into sufficient action to prevent it. It was involuntary, still it did not convey the idea of being spasmodic, in any morbid understanding of the term. She was directed to open her eyes, to answer questions, &c., but gave not the least evidence of consciousness of anything said. I now proceeded to extract. The os uteri at once came down again, and much embarrassed the operation, so that I desired Mr. Dwelley to pass his fingers between the shoulders of the forceps and the symphysis pubis, and gently press the protruding os uteri upwards. He did so, and thus removed that part from the chance of injury. The extraction was continued at intervals. Not the smallest complaint was made. The womb was roused to action, and strong expulsatory efforts were made. The head advanced, and everything promised well. But at length the head became again firmly fixed, and this to a degree which prevented its being moved by any such force as I believed it safe to employ. I removed the forceps. The effects of the ether passed off, but as soon as consciousness returned, most earnest demands were made for more. "Put it to my mouth—I shall faint—you must;" in short, all forms of entreaty were made use of to obtain the entire relief

that the ether had produced. She had at first refused to employ it. The ether had now been used up, and a short delay took place while a further supply was sent for. I perforated the cranium, fixed the hook, and made some extracting effort. Again was complaint made of the suffering which was immediately produced by the traction. The repose had been entire since consciousness had returned. She thought she was delivered. Said that she had *sense*, knew that she was alive, after the sponge was put to her mouth, but that she had no *feeling* after, and knew not what had happened. She had passed the time in most entire freedom from all pain. She said that there had been light before her eyes, and buzzing in her ears, and that she had been in another world. The aphonia had entirely disappeared, and her voice was natural. The ether was again applied to the mouth and nose, and when it was ascertained that its full effects were present, extracting effort was made by the hook. Again did the womb act, and the head advanced. Its progress was very slow. Much effort was demanded to bring the head along. The ether was used several times before the labor was over. In fact, she was most of the time inspiring the vapor, largely mixed with atmospheric air, for her pillow and bed-clothes were necessarily kept wet with it, from the mode of using it. There was no accident, or the least untoward circumstance attending the delivery. There was no pain—no complaint—no resistance of the effort used for delivery. The limbs were perfectly flaccid, and it was necessary that they should be kept separate by an assistant, and the whole weight of the upper one was to be supported. She came to herself

soon after the child was born, and again expressed her entire ignorance as to everything that had been done. The placenta was separated, and reached the outlet by the unaided efforts of the womb, and no hemorrhage followed. A swathe was applied to the abdomen, and the patient made comfortable in her bed. I left soon after, having ascertained that her pulse was as good as it had been for some hours, and that every thing promised well. It was impossible to determine what injury, if any, so long continued pressure of the head had produced. The bladder had been carefully attended to, and the least possible amount of examination, I was told, had been made during the whole attendance on the case. The child had been dead some hours.

May Sth, 9, A. M.—I learned that soon after I left, the womb expelled from its cavity a large mass of coagula, with a gush of liquid blood. Cold was immediately applied to the abdomen, and the flow ceased. It was not so great as to affect at all her strength, or her pulse. I learned that she had passed an excellent night, and had slept as tranquilly as if under the kindest influence of opium. Her pulse was 108, of good strength and volume—tongue moist, head clear, and her whole state perfectly comfortable. We were particularly struck with these facts, in the distinct recollection of the long-continued suffering which a short time before had been endured. She had passed no water. The catheter was introduced with great ease, but got clogged with blood in its passage, so as draw very little, if any urine. Mrs. H. said soon after that she felt a strong inclination to pass water, and in making an effort to do so there was expelled from

the vagina a firm coagulum, and immediately after the urine followed voluntarily, and with perfect relief. Directions were given that the greatest quiet should be preserved, and sleep encouraged. Liquid farinaceans dict was ordered.

9th, A. M., 9 o'clock.—Mrs. H. slept most of yesterday, and less well last night. That is, was awake, but comfortable the first part of night, slept latter part. Pulse now 104. Skin natural. No pain in abdomen, and no tenderness on pressure. Urine natural. Somewhat thirsty. Tongue slightly dry. No appearance of milk.

10th, 10, A. M.—Patient very comfortable. Pulse 103. Skin warm. Breasts distended and painful. Abdomen soft. Two dejections from 3 ij ol. rie., and as much lemon juice. In all respects doing well.

Remarks.—The ether was applied by a sponge. It was very easily applied. The effect was produced very soon, in about a minute, say after about fourteen inhalations, and when consciousness was returning, one or two inhalations were enough to procure insensibility. The room, or the atmosphere about the patient, was saturated with ether. Was there not danger of explosion had a candle or lamp been brought into this atmosphere? I have heard of experiments which were designed to prove that this fear is groundless. I have not seen them, and should be unwilling to act in accordance with them. In the knowledge that equal parts of the vapor of ether and atmospheric air, produce a compound as explosive as hydrogen and oxygen, he who uses ether at night should be most cautious to keep a lighted candle or lamp at

a distance from the patient. As our midwifery arrangements so frequently occur at night, this may sometimes be an inconvenience. We cannot examine the pulse or the countenance during the use of ether, which it is very desirable to do. But we had better lose such opportunity, than incur the least risk of the explosion of the gas.

Cases are reported of instrumental labor in a Paris hospital under the use of ether, which were fatal by the supervention of puerperal fever. But this result will hardly be ascribed to the ether used, or be made an objection to its use elsewhere, as puerperal fever existed at the time in the hospital, and everybody who knows anything of the disease, must be aware how readily it extends itself from patient to patient, especially in hospitals. It is said that this is especially true of the hospitals in Paris. I have not in memory a case of instrumental labor of so much severity as this above reported, from which recovery was so rapid, or so complete, and in which suffering was so slight. I do not recollect that a complaint was made of any suffering, from the time of the inhalation to the day on which I made my last visit.

Not only in Paris, but in Edinburgh also, has this method been tried in labor. To no one is the profession more indebted than to Dr. Simpson, Professor in the Edinburgh University, on this behalf. I quote from Forbes' Medical Review, the latest No., the leading authority in medical literature in Europe, the following on the subject. I do it for the facts to which it refers, and especially for the caution with which the information is accompanied. From the same Review I make an extract which represents the opinion of Dubois, with an important remark from the reviewer.

“ In a communication which we have received from Edinburgh, dated the 22d of March, Dr. Simpson states that he had, up to that date, used etherization some forty or fifty times, with the most perfect safety and sneeess. We understand that he has kept it up *for hours*—in one woman four, in another six hours, without the fœtal heart varying above ten or twelve beats during the whole time, the mother in both cases recovering perfectly, and both, of course, astonished at being delivered without being aware of it. We believe that Dr. Simpson, in making these statements, still inculcates caution in the use of the new means; justly regarding all his own trials hitherto, bold as they are, as merely experimental, and as only first fruits which, however delightful and promising, may not be the positive harbingers of an abundant and a wholesome harvest.”*

“ M. Dubois’s opinion is, on the whole, not in favor of the employment of ether in midwifery, although he admits that he has seen no ill effects that he could, with certainty, attribute to it. He thinks, ‘that it should be restrained to a very limited number of cases, the nature of which ulterior experience will better allow us to determine.’ He, however, confesses that the result of the cases he has treated in this manner, has lessened the fears with which he originally entered on the trial. We leave the Professor and the Baron—the doughty champions and learned representatives of the obstetries of Paris and Edinburgh—to fight the battle between them. Time, at least, will ere long determine which of the two is in the right.

* P. 568.—The British and Foreign Medical Review, edited by John Forbes, M. M., F. R. S., &c. &c., No. 46, April, 1846.

We are disposed to believe that neither is absolutely so; and that here, as in many other instances of clashing opinions, the truth lies between.”*

The action of the womb in the above case, in the absence of all voluntary agency, was very striking. Not only was there natural expulsatory effort, which was aiding the manual, but the effort was marked occasionally by its audible expression, the *bearing down*, which is so well known. I was reminded of this effort during insensibility, by a case of most severe puerperal convulsions, which came under my notice the day after the above case. The organic effort, in the entire abolition of voluntary power, was most striking. I have known the child born by this organic agency, without the least apparent consciousness of the event on the part of the mother at the time, or memory of it afterwards. In this fact, established by so many, and so varied observations at home and abroad—in this fact of efficient uterine action, during the full effect of a well-known agent, ether, and the use of which has thus far been so safe, and the application and *modus operandi* of which, a wider observation will do more and more to determine—may we not in such a fact look with confidence to the time when labor will be accomplished with an ease, a freedom from suffering, quite as great as has hitherto been the pain which has accompanied it, and which has been regarded as its necessary condition?

* P. 569.—The British and Foreign Medical Review, edited by John Forbes, M. D., F. R. S., &c. &c., No. 46, April, 1846.

CASE II.

Mrs. S., aged 23, first labor. Was taken in labor, at 12, midnight, May 15th. I saw her in consultation, 16th, about 9, P. M. I learned that her pains had been very severe—that the child advanced well until it reached the bony outlet, and that there it stopped—that vehement pains had continued, but without making any progress in the labor. The pains were now losing power, and appearances of approaching exhaustion were present. The pulse was compressible. The os uteri had not disappeared. The presentation was natural. The occiput was towards the right acetabulum, the forehead towards the opposite sacro-iliac synchondrosis.

After a very careful examination of the case, it was agreed that the forceps should be used, and the ether exhibited. The instrument selected was a modification of Hamilton's and Smellie's, less curved than the first named, and rather longer than the last. It was applied with ease. There was tenderness about the inferior commissure of the external organs, and much complaint made of the pressure of the instrument there. Of its presence within the pelvis no complaint was made. The ether was now exhibited, by means of a sponge, as in the case reported above. In about a minute, the full effects of the ether became apparent. Consciousness was entirely abolished. Extracting efforts were now made, and the child soon began to descend. The womb acted powerfully. In the first efforts with the instrument, instead of a *bearing down* effort, an opposite

one was made. The lower limbs were straightened out with much force, and the instrument drawn inwards into the pelvis. This was very striking. But a very short re-application of the sponge obviated this difficulty entirely, and the child favorably descended, and no farther organic resistance to delivery occurred. The head was born. The child breathed, and everything promised well. But pains did not occur for some time. As happens not unfrequently after the accomplishment of delivery thus far, after very severe labor, contractions cease as from exhaustion, and the child remains in great peril. Perhaps as many children are lost in this way as from any other accident in delivery. At length, however, an arm was brought down, the womb acted, and very slowly the child was born. Some time elapsed before the placenta was detached, but this came naturally away. The child was alive, and cried sufficiently. It was a boy, and weighed nine pounds.

Mrs. S. was now asked of her state during labor. She had been directed to make voluntary effort to aid the delivery of the child and placenta, and she had done so. She expressed her entire satisfaction with the effects of the ether. She said how wonderful it was that she should have got through without the least suffering, and how grateful she was. She asked earnestly why the ether had not been used earlier. She said she had called on a friend, naming her—that she had been into Hanover street, called at a shop (a milliner's shop), and there had talked and laughed with the rest, and made a good deal of noise, too. Her manner was perfectly natural. There was much vivacity in it—a freedom from the least idea

that what she related had been other than a matter of recent and entire experience, which was exceedingly striking.

May 17th.—Comfortable; good night; pulse 104, of good strength; skin warm; color natural. At the moment of my coming into her room, Mrs. S. was complaining of uneasiness at the lower part of the abdomen. I found that the bladder was distended, and this probably caused the complaint. A successful effort was made to empty it, and relief at once followed. I asked again concerning her state during the labor, while under the power of the ether. She said she remembered nothing from the first inhalation to the moment when the afterbirth was taken away. I told her she had talked, had described her feelings after inhalation, had told us where she had been, &c. &c. Well, she said, she did not know anything about that. She could only repeat what she just said, that she remembered nothing about it, not a word, not a syllable. I asked if she did not recollect that I was there, and used instruments, and endeavored to bring to her remembrance other matters. She said again and again, she remembered nothing about it. In Mrs. H.'s case, I stated that she had *sense*, but not *feeling* that she knew she was alive, and that people were about her, and assisting her labor, &c., but that she felt nothing—had no pain. And this experience of Mrs. H. corresponds with that of the cases of many others who have inhaled ether, and which have been reported. A case is now in my memory of an intelligent woman who had several teeth removed by my advice after inhaling ether. She had no pain, but still knew what the dentist was about.

Remarks.—The success of the above case furnishes additional evidence of the beneficial uses of ether in labor. A sponge was again used. It was partially covered by a strong bit of brown paper. This prevented evaporation and waste, and somewhat prevented the diffusion of the vaporized ether in the chamber. One who has made much use of ether in medical practice, says he covers the sponge with a bit of cloth, or folded towel. Another covers it with a cup or a saucer. Whatever may be used, it is very necessary to be sure that it does not prevent atmospheric air entering the lungs along with the vapor. A portion only of the sponge should be covered; the air will find its way through its uncovered edges. The sponge is to be removed as soon as the effects of the ether have been produced. This is at once learned by speaking to the patient, bidding him to open his eyes, to answer questions, &c. The state is so obvious, so wholly different from what existed before the sponge was applied, that the observer can hardly fail to make it out. Afterwards, the effect may be continued, if need be, by very slight or short applications of the sponge. Let it be especially borne in mind that insensibility to pain, a perfect unconsciousness in regard to suffering, may be present, while the patient may be perfectly conscious of other things, namely, of persons about him, what is doing, &c. This it is which makes one of the most curious facts in etherization, and demands the special notice of the practitioner. The application of ether to labor has been made because its fullest agency does not interfere with the involuntary agencies, the action of the womb, on which delivery depends. The womb acts

under the fullest effects of ether, just as regularly as does the heart or the lungs. Nay, I have observed obviously good effects during etherization, in the absence of voluntary efforts, the *bearing down*, to which the patient is so strongly tempted in order to bring to a more speedy close the extreme suffering that is experienced. There has been far less exhaustion after labor from the absence of the voluntary effort, and the danger of graver accidents is much diminished. Effort is in an important sense proportionate to the demand, and relaxation goes on steadily and in harmony with the pressure which demands it. Professor Simpson thinks he has seen that an increase of uterine effort where it was demanded, has been the result of etherization.

I would speak of what occurred strongly to my own mind, in dwelling upon the first case which came under my notice, and which I find alluded to by other observers. I now refer to a feeling of hurry, growing out of the fear that the effects of ether will pass off before the case is over, or the operation be completed. This feeling should have no place. Let every step of every process which has been made amenable to such an agent as ether—which suspends such a function as pain,—leaving the patient conscious, it may be of everything but of suffering,—let every step of every operation be proceeded in with the utmost composure, and the abiding conviction that the state which ether has produced may be surely and with safety continued as long as the circumstances of cases may demand. In a following case this state was sustained sufficiently to render labor entirely free from suffering, for nearly nine consecutive hours. “Professor Simpson

gives one in which the patient was kept by the ether's use, in a complete state of unconsciousness as to pain for four hours; delivery being at length accomplished painlessly, without her knowledge, and with perfect safety to both mother and child. And it is further worthy of note, that the former was a person of very delicate frame. In a more recent case, the patient was kept etherized for six consecutive hours, was delivered unconsciously by use of forceps, felt no pain, and did well."

The ether used in my cases was obtained at Burnett's, Tremont Row. He gets it in large quantities from Philadelphia, where it is made for him with great care. Ether should be *perfectly pure*, when to be used for inhalation. It should contain neither free alcohol, nor free acid. I am told that it is not easy to get it of the required purity. I have within a day, heard that ether for inhalation is made at the Roxbury Chemical Works. The established reputation of Mr. Hays as a practical, as well as scientific chemist, is a sufficient voucher for the excellence of such articles as are made at the establishment above named, and over which he presides.

A convenient form of sponge for this use, is the funnel-shape, which may be always found. It may be large enough fairly to receive and cover the nose and mouth, reaching to the lower eyelid, and edges of chin. At the first inhalation some cough, or slight suffocation may be experienced. Remove the sponge a little, and approach it slowly to the face, and there will be no farther trouble in continued inhalation. About four ounces of ether were used in the above case, not a third of the quantity first employed.

Again. I strongly recommend, in instrumental labor, the application of the instrument *before* the ether is inhaled. In this way it will be ascertained, if any, what injury the patient is suffering by its introduction. In general, may I not say always, when the instrument is inapplicable or unskillfully used, some obstruction to its progress is encountered. This produces pain. The patient complains, and the error should be at once corrected, or measures taken for its correction. There will be complaint in many, it may be in all, cases. But there is a difference in that expression of pain which comes merely of the novelty of impression made by the instrument, or that sensitiveness which long-continued suffering produces—there is a difference between this, and that suffering which comes directly of injury, and is so striking, that any one at all acquainted with instrumental labor will at once notice it, and govern himself accordingly. I remember a caution growing out of like chance of doing unnecessary injury in a surgical operation, viz., by including a portion of the bladder in the instrument which seizes the stone in *lithotrity*. It is advised in this operation not to use ether, lest during the state of insensibility, the bladder may be injured. The most dangerous lesion may be done an organ in this state, of which the surgeon may be as unconscious as is the patient. I dwell upon this caution in our midwifery engagements as of serious importance, and to which there can be no reasonable objection.

CASE III.

Mrs. R., aged 18; first child. Taken with uterine pain June 10, at 5 A. M. Saw her between 3 and 4, P. M. Labor well marked—pains severe—complaint of suffering emphatic. Examination showed natural presentation, and good progress. Pain increased gradually in strength, and the head reached the outlet favorably. It here made slight if any progress. At length, notwithstanding very severe pains, it hardly advanced at all. Between 8 and 9 it reached the external organs, and the perineum was pressed somewhat forward. Here again it rested. The perineum was very slightly dilatable. Pains now diminished in force, and the intervals became longer. Still distress was great. I sent for, and exhibited ether. The pulse, respiration, and temperature, were natural. At first Mrs. R. refused the sponge, and this with much determination. At length she consented to breathe at it, and was in about a minute fairly under the influence of the vapor. The sponge was removed, and placed at a distance from her in the bed. Pains continued regular, and soon became stronger, and intervals shorter. The perineum became dilatable, and the head advanced. Some return of consciousness took place, it seems of pain, and of the relief she had experienced from the inhalation, for without being seen she got possession of the sponge, and breathed at it with the greatest avidity, so that when discovered it was with much difficulty forced away. The child was born in four or five pains after etherization. The placenta was soon

thrown off—the womb contracted well, and a swathe was carefully applied.

The return to consciousness was slow. There was exhibited more excitement than I have before met with. There was a full expression of previous most perfect freedom from suffering. A state of entire pleasure was expressed. She sung, talked, raised her arms high in the air. She did not recollect me, or anybody about her. Her child's cries, which were very loud, attracted strongly her notice. She passed her hand over her abdomen firmly, as if to learn what had happened, and her countenance expressed much surprise. Pulse continued natural; complexion good; temperature as during labor. Some hemorrhage, but not enough to do harm. She said she was very hungry, and thirsty, and took with much relish gruel, and water. After-pains occurred in about half an hour after labor was over, with much severity, and for which I prescribed camphor and opium in pills. I left her otherwise comfortable. Slight hemorrhage.

June 11th. 9, A. M.—Pulse, &c., good, no tenderness of abdomen. After-pains increased, and troubled her all night. Exist now. Great increase of pain by motion, so that I removed urine by catheter, as motion for this function she feared would give great distress. Felt better after operation. Hemorrhage considerable in night, but not sufficient to do harm. 6, P. M. More comfortable; less pain. Prescribed Dover's powder for pill. Ol. ric. in the morning.

12th. 6, P. M.—Detained by obstetric case all day, and could not see Mrs. R. before. I found her very comfortable. Oil had operated well. Night had been perfectly good. Looks remarkably well.

Pulse good. Abdomen soft, free from soreness or pain.

13th.—Perfectly well. Some milk in breasts. I now inquired particularly as to consciousness during labor, and immediately after. Remembers nothing. Is surprised at my questions, so wholly unconscious as they show her to herself to have been.

CASE IV.

June 12th.—Mrs. W., 25; first labor. For three weeks last past, she has suffered much from pain referred to womb. At times so severe that she thought of sending for nurse, and physician. Last night, at 12, in absence of pain, membranes broke and a large quantity of water was discharged. I was called to see her between 1 and 2, as pains had begun. I found the os uteri dilated somewhat, dilatable, very thin at its edges, and continuing so some distance towards neck. Pains regular but slight. I went to bed, to be called when needed. At 6, I found pains had continued all night. Os uteri more dilated. Went home. Called again between 8 and 9. I now found much change had occurred. Os uteri had nearly disappeared, and yielded to very small pressure. Head presenting well, and quite low in pelvis. From the severity of the pains, and the generally favorable state of things, I resolved to use ether. This was done about 9, A. M. Its first effect was

excitement. There were startings, exclamations, the arms were projected. "I am dying, I am dying," said Mrs W.. I had my finger on the wrist, and carefully examined the pulse. It was about 90 before etherization. It rose to 98; and this was its number, with temporary changes, during the whole of the labor after ether. Excitement soon passed by, and a pleasant calm succeeded. The expressions were now of pleasure only. "How beautiful! how beautiful!" was the language of the labor. The state of etherization was moderately sustained during the whole day. Mrs. W. had some latent feeling about the remedy which much influenced the case. She would vehemently demand the sponge, and that it should be thoroughly wet with ether. She would put it aside, as soon as she began to feel its effects. At times, however, she would experience its full effects. She was thus by no means wholly unconscious. I mean in that degree of it as to be unaware of people and things around her. Sometimes she would say, "I know you, Dr. C.," "I know you, Mrs. F.," &c. &c.; as if to let us understand that though she was unconscious of pain, she knew all other things. She would say, when demanding the sponge, "do n't be afraid of hurting me. I know just how much I want, and will tell you when to take it away." And this was done after a manner which I have seen in no other case. The labor was delayed by the state of the perineum. It was very wide, leaving the os externum very small. Through this protruded a round mass of scalp, and a conical-shaped bony mass of scull. The occiput had fairly cleared the arch of the pubis, and still delivery did not

take place. After an ointment of ext. of belladonna and simple cerate was liberally used, inside the vagina, and over the perineum, dilation took place readily, and the child was born. There was perfect abolition of pain in this closing period of labor, and when suffering is, I may say, always so great. The womb contracted well. The placenta was easily detached by natural effort, and, with some coagula, was expelled. A swathe was applied. Child, a female, weighing seven and a half pounds. It did not breathe immediately after its head was born, but soon breathed after cold water was dashed on its face and breast, and did perfectly well. During the labor, 3 j. ergot was infused in about vi. oz boiling water, and the tea without the powder taken. Some increase of pain undoubtedly followed its use. The bladder was emptied with the catheter once during the day.

Labor began in this case at 12 the preceding night, and was ended at 6, P. M., the following day. The ether was first inhaled between 8 and 9, A. M., and its influence was sustained, as above described, till nearly 5, P. M. Mrs. W. described her state, when consciousness returned after labor, as one of perfect ease and enjoyment. She had hardly had a pain. She had little memory of pain. The ether had made tolerable what she thought she could hardly have lived through without. She had been in pain, she said, three weeks; her nights disturbed and her days most uncomfortable. She expressed her gratitude for this means of her comfort, through a whole day, after a manner which I have not heard paralleled. I left her with a calm pulse, manner perfectly natural, skin

temperate, head free from pain, abdomen easy, eyes closed, and sleep approaching.

13th. 10, A. M.—Night good. Slight pain in abdomen in night occurred three times. Five grains of Dover's powder were given, and perfect quiet followed. Pulse S4; abdomen soft; lochia natural; no urine, has attempted to pass it, but failed. Catheter, about twenty ounces taken away. In all respects doing well. 10, P. M. Day very comfortable. Has slight uneasiness in the region of the heart, to which she has long been subject. Has failed to pass urine, and catheter was used. Ol ric., suc. limon, āā 3 ij., M. in the morning.

14th. 9, A. M.—Excellent night. Urine natural. Two free dejections from oil. Pulse, &c., natural. Milk without any precursory disturbance or excitement. Is nursing her child.

15th. Quite as well, except some trouble about lactation.

CASE V.

June 14th.—Mrs. G. W. A., 36; fourth child. Labor began Friday, 11th. Physician called Saturday, 12th, at 8, A. M. Labor pain distinct, strong; head at upper part of pelvis, or rather a cushiony tumor of which the diagnosis was not easy. This state of things continued. He passed Saturday night with his patient, because of the severity of the labor. Sun-

day, 13th, things much the same. Membranes broke P. M., and a large quantity of water came away. Still the head remained much where it was. The os uteri dilatable, soft, spongy, as if infiltrated. He passed the night again with his patient. Monday morning I saw her at about 8, A. M., about sixty hours from beginning of labor, and forty-eight of continuous labor.

The presentation was just what and where it was when first discovered. A firm, somewhat elastic tumor filled part of the pelvis. I did not, at my first examination, feel any portion of the cranium. The tumor felt very much like a blood tumor of great size. It remained tense in *the intervals* of pains, and did not seem more tense during pains. I advised the use of ether at once, to lessen the severe suffering of the patient, and having directed how it was to be used, left, to see a patient whose situation made an early visit very important. I returned between 8 and 9. Partial relief had been gained by the ether; suffering was less. I examined again with much care, and could make out towards the right sacro-iliac synchondrosis, the well-defined *edge of a bone*. I pressed the presenting tumor here very firmly, and could find no bone opposite to or in the neighborhood of that part against which my finger had rested. I now felt satisfied that the case was one of hydrocephalus, and that it was water which I felt behind the scalp, and which formed the tumor. The ether was used. Perfect unconsciousness did not take place more than once, but the diminution of suffering was most striking, and the ether more and more emphatically demanded. The perforator was now carried through the distended

scalp, and a gush of water at once followed. Nearly a quart was received into a vessel, while a very large quantity escaped into the bed and guard. Extraction was now made, and after a few ineffectual efforts the head advanced. The difficulty was in the loose condition of the bones, and the thinness of the scalp. The hook, from these circumstances, frequently broke itself away. The ether was still used. Entire abolition of consciousness was produced. The pulse continued steadily at about 100, the number when first examined. If anything it was quicker at my first visit, than during the use of the ether, and while extraction was proceeding. The child was born slowly, and easily after the head had entered the pelvis. The placenta followed readily. A swathe was applied, and the patient made easy and comfortable in her bed. Child's head consisted of loose cranial bones, thin scalp, and a large cavity. Spina bifida at lower part of spine. It seemed impossible for Mrs. A. to express the gratitude she felt for the pleasure, and the ease afforded to her by the ether. It was astonishing to her, that she who had always suffered so much in labor, and for so many nights and days in this last one, and who after former labors had been in such distress— it seemed most wonderful to her to feel now so easy and so happy. I left her in this state at about 11, A. M.

5, P. M.—Saw Mrs. A. She has been perfectly comfortable all day, has slept much, passed water twice, no after pains; much meteorism, but no hardness, soreness or pain of abdomen. Respiration easy; countenance easy, and has lost that contraction which the long experience of acute pain gave it, and has ac-

quired the appearance of healthy fullness. Complexion natural. Pulse 108, soft. Says she is perfectly free from uneasiness of any kind. Is provisionally to take 3 ij ol. ric. and suc. lim. each, in morning, and five grains pulv. Dover, if need be, to-night.

15th. 10, A. M.—Pulse 108. Abdomen less full. Respiration easy. Temperature natural. Night good. Has taken oil. No dejection.

16. 9, A. M.—Pulse 104. Two dejections. Urine natural. Without any uneasiness when at rest. Is annoyed by motion, the whole body being sore from long-continued and violent labor.

20. Without complaint. Reports herself to be well.

Remarks.—Mrs. R.'s case presents the full effects of ether perhaps more strikingly than either of the others. That is, in her they were more perfectly produced. Still the time was short of their continuance, and not any cause for uneasiness marked any of its periods. The sponge which she reached and held with so much force, had become almost or quite dry, as some time had passed from its application. Her case is also striking as presenting perhaps the most perfect want of memory met with in any case I have witnessed.

Mrs. W.'s case. In this case ether was used nearly or quite nine hours. But except in its first inhalation, and the latest, nothing like its full effect was manifested. She managed the use of it herself. That is, she asked for it when she thought it was needed, namely, when a pain was coming on, and threw it by her as soon as she felt its influence approaching.

Again and again she has assured me that her suffering after etherization was as nothing compared with her former state, and the *last pains were not felt at all*. The case differs from others in the whole agency of the patient during this long trial of ether. I have never known so much used, and certainly its effects could not have been more happy. The consciousness of the period when ether was used has been matter of distinct memory since. There were misgivings among her friends as to the expediency of its use, for they knew that she had formerly suffered from headache; but this was never stated to me. She had suffered also from pain in the region of the heart; but of this, also, I knew nothing till it occurred slightly the day after labor, when it was referred to by Mrs. W. It is suggested that it will always be well to learn if peculiarities exist in patients, or if morbid predispositions may be supposed to belong to them. In the above case, however, nothing occurred for a moment to disturb the feeling of the entire safety of the patient. I have lately met with a suggestion in an excellent paper on the use of ether, that there may be risk in using it in cases in which the heart is diseased.

Mrs. A.'s case differs from all the others. But its history leaves very little to be added. Relief of suffering was as marked in her case as in any I have met with. I have never seen insensibility more strikingly produced by ether. She was for a short time as in the deepest, most tranquil sleep. This was at the close of the labor. It saved her all pain in the time of ordinarily the greatest suffering. She is recovering, though less rapidly than the others, but still quite as fast as the early history of her ease would have led one to expect.

CASE VI.

June 23.—I was desired to see Mrs. G., between 5 and 6 o'clock this morning. On reaching the address, I learned that Mrs. G. was 24 years old,—that this was her first labor,—that she had been in labor about sixty hours, and that such had been the severity of the symptoms that her physician had passed the last forty-eight hours constantly in her chamber, both nights, and most of both days. I farther learned that on Sunday, there had been slight hemorrhage, more on Monday, but the water coming away on that day, the hemorrhage ceased, and had not returned. There had been vomiting just before my visit. Notwithstanding the violence of the pains, and the extreme suffering of the patient the head of the child remained just where it was ten hours before my being called.

Upon examination I found the head presenting perfectly well, and just within the bony outlet. It was not all engaged under the arch, and the movements of the child were strong and distinct. The os uteri was partially dilated, and dilatable,—the functions of neighboring organs natural,—head free from pain,—face pale, and somewhat sunken, and an obvious loss of power had been observed within the last few hours. During a pain I could not discover such an effect upon the head as lead me to suppose that labor was any nearer a termination than it had been, as represented to me for many preceding hours. Here was the case. Between two and three days of suffering, sleepless nights, and sleepless days. Obvious symptoms of exhaustion. The stomach had begun to fail. I

thought at first of using the forceps. But the os uteri was in the way, and I felt no assurance that it would not continue to follow the head, and so produce serious present embarrassment and future trouble. The suffering from the pains was hourly increasing, and the pains themselves losing power. I suggested the ether to the medical attendant, and he agreed that it should be tried. Inhalation was at first but awkwardly accomplished, and with imperfect results, but in a short time the patient inspired the vapor more perfectly, and very soon manifested its powers. The process was begun a little after six, and the child was born at a little past eight. The uterine effort increased very soon after inhalation was begun. The pains grew stronger and stronger, and advanced the child slowly and steadily. Belladonna ointment was also used, and dilatation went on satisfactorily. The intervals of pains were passed in quiet sleep for the most part. They had been exceedingly distressing before using ether. Voluntary effort was obviously wanting often, and always when full etherization occurred. There was noise, bearing down, strong effort. But you saw that they were just in proportion to the demand, and so obviously increased the uterine agency. There was no voluntary shrinking from pains, which often does much to retard delivery, but what effort was made was beneficial.

The child was born alive, a boy, weighing seven pounds. Soon after delivery of child, the uterus contracted, and expelled a quantity of coagula, and much liquid blood. I found the placenta beyond reach, and hemorrhage going on. I at once passed my hand into the womb to ascertain the situation of the placenta,

why it was retained, and to bring it away. I found a portion of it detached, and the remainder firmly adherent to the womb. I proceeded cautiously to separate and remove it. The womb contracted well, and the hemorrhage was stopped. The contraction was again ascertained by pressure upon the abdomen, and a swathe carefully applied. Relaxation however occurred, and more bleeding. This was again checked, and ice internally and externally used. Mrs. G. was now faint, exhausted, but did lose her pulse at all. Stimulants were employed, and at half-past ten I left her with a pulse of 128, much slower than it had been,—firm, regular,—temperature natural,—respiration easy,—no sighing,—no jactitations, and quiet sleep coming on. I saw her again between 11 and 12, and between 12 and 1, and found her with quite as good symptoms as I left her with after my first visit.

5, P. M.—In all respects better. Pulse of sufficient strength, between 80 and 90. No return of hemorrhage. Lips, tongue, and cheeks, have sufficient color. Reaction sufficiently established to allow of moving her, and arranging her dress for the night. This was done without producing the least exhaustion, or faintness. Speaks of the relief of pain from the ether. Says she was aware of uterine efforts, but it seemed to her like simple straining with a sense of something advancing, and not at all like pain. She strongly commended ether to all women who were suffering the pains of labor.

24th. 9, A. M.—Night perfectly good. No complaint this morning. Renal and other functions natural. Perfect and moderate reaction, with excellent prospects of doing well.

25th. 9, A. M. Through yesterday very comfortable. In night some occasional pain in abdomen, for which got five grains Dover's powder, and afterwards ten drops Laudanum. Milk has come freely, with scarce any of the usual precursors of lactation,—a slight chill, and slight headache only. Nursing, as is usual at this period from labor, causes uterine contraction, and some pain. Womb now fairly contracted. Pulse 96, soft, of good strength,—Respirations 20 in minute, perfectly easy. Urine and Lochia natural. Some heaviness from opium last night, and from five grains of Dover's powder taken about an hour ago.

Remarks.—The symptoms in this case were rather those of *collapse* than those which are the results of hemorrhage. The quantity lost was not great. But the loss of power from long and most exhausting labor was very great. Hence the difficulty of preserving the contraction of the womb, which for a time was very perfect, and the immediate sinking which followed relaxation. The means for maintaining contraction were most carefully continued—ice, and iced water, pressure,—cold, applied externally and internally;—ergot—tinctures of cinnamon and cinchona combined, formed the principal of these means, and were at length sufficient for the purpose. The fact which showed how much the symptoms depended on collapse, was the occurrence of sinking, death-like faintness, and expression of countenance, which so marked relaxation of the womb, without the occurrence of internal or external hemorrhage; for of this last fact I was abundantly satisfied. This state im-

posed the necessity of most constant vigilance. The medical attendant who had passed forty-eight hours with his patient did not leave her till 6, P. M., of the day she was confined, nearly ten hours after that event, and during that whole time was using means to carry on life or its functions, till reaction showed itself. For hours he preserved by direct pressure the contraction of the womb, almost without interruption, and without changing his place. It is by services like these that the practitioner of midwifery truly and faithfully serves his patient and the public. By neglect of such services life must often be jeopardized.

The state of collapse is further to be inferred from the length and severity of the labor, and the loss of power which such a process is calculated to produce. And finally, it is proved by the early and free reaction which followed entire rest, and nourishment, and stimuli. When reaction occurs you feel assured that the patient is safe. How long is the solicitude concerning that condition which hemorrhage induces, and how often are seemingly well laid hopes frustrated?

It should have been stated that severe pain and soreness had been felt in the last weeks of pregnancy in that spot, corresponding to which adhesion of the placenta was met with.

I look back upon the agency of ether in this case as very important. It stopped pain, suffering, and so checked threatening prostration. It would seem also to have made labor shorter, for in *two hours* that was accomplished which whole days did so little to advance. In this way it did excellent service in diminishing exhaustion, or farther waste of power.





